

Iliopsoas Muscle Tears

Surgery Service



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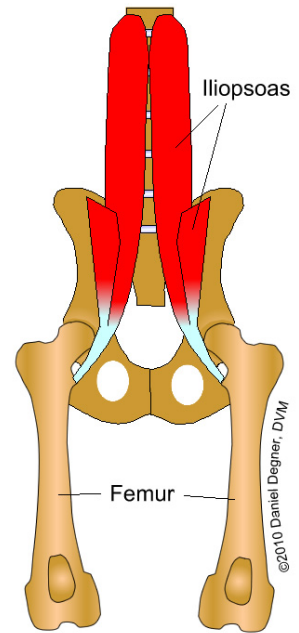
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Anatomy

The iliopsoas muscle consists of the fusion of the iliacus and psoas major muscles. The psoas muscle attaches along the under side of the backbones and the iliacus attaches on the inner side of the pelvis. These two muscles join together and form a common tendon that attaches onto the lesser trochanter of the thigh bone (femur). The function of this muscle is to externally rotate and flex the hip joint. Animals can function without this muscle.

Iliopsoas strain (tear) results from excessive stretching of this muscle during highly athletic activities such as agility or Frisbee playing. The injury occurs commonly at or near the muscle-tendon junction, the weak link. Slipping into a splay-legged position, jumping off an elevated surface, excessive training or play, and roughhousing with other pets are common causes of the muscle strain.



Clinical signs and diagnosis

Iliopsoas muscle tears are relatively common yet infrequently diagnosed injury in dogs. Tearing of this muscle is very painful and causes pain and lameness. Commonly, exercise exacerbates the lameness with this condition. Pain is noted when stretching the affected muscle by putting the hip in extension with abduction or by putting the hip in extension with internal rotation.

X-rays frequently do not show the muscle tear in the acute phase; however, in chronic cases the torn muscle may have mineralized densities. Ultrasound is a good tool to help diagnose this problem, but sometimes the muscle may only have microscopic changes that may not be seen on ultrasound imaging. MRI and CT scan are other diagnostic tools that can help in the diagnosis of the problem. Commonly, the diagnosis is based on the clinical findings during the examination.

The day of surgery

If surgery is recommended, our anesthesia and surgical team will prescribe a pain management program, both during and after surgery that will keep your companion comfortable. This will include a combination of general anesthesia, injectable analgesics, epidural anesthesia, oral analgesics and anti-inflammatories.

Treatment

An iliopsoas muscle tear that occurs acutely should be treated medically and surgery is only reserved for unresponsive cases. Muscle relaxing medications are used to ameliorate muscle spasms and pain. Other treatments include the administration of nonsteroidal anti-inflammatories (Rimadyl, Deramaxx, Previcox, etc), applying a cold compress to the groin and exercise restriction. Rehabilitation therapy, conducted by a trained professional, is a very

Iliopsoas Muscle Tear Continued...

important treatment modality and includes laser therapy to improve the circulation to the muscle and hasten the healing process. Passive range of motion (not too excessive so that it is not painful) helps to maintain flexibility of the muscle. Overstretching of the muscle can further tear the muscle and delay healing. Interferential e-stimulation, exercises and progressively increasing the weight bearing of the affected limb are beneficial. After a few weeks, active range of motion and exercises to strengthen the muscles is added to the rehabilitation program. Exercises that strengthen the muscles include cavaletti pole stepping, para standing which involves lifting the front and hind limbs on the unaffected side, placing the paws on an elevated surface, and wobble board exercises. Acupuncture may also be utilized to help control pain and assist in the healing process.

Chronic strains should not be treated with nonsteroidal anti-inflammatories, as this will prevent activation of the inflammatory process that is needed to reinitiate the healing process. Rehabilitation therapy by a professional is essential. Rehabilitation may include heat therapy, deep penetrating ultrasound, cold laser therapy, and massage. Unlike acute tears, chronic tears are treated with stretching and exercise. Recovery from chronic iliopsoas strain takes months. If your companion is an agility dog, weave poles, tight turns, and high jumps should be avoided during the early reconditioning period.

To prevent reinjury to the iliopsoas muscle, pre-exercise stretching of the muscle should be done. Extension and abduction of the hip is an excellent stretching exercise for the iliopsoas muscle. In fact, stretching of all muscles is a very good idea for any canine athlete. Before strenuous activity is initiated, low jumps and wide turns should be done. Stretching with no warm up can be harmful to the muscles and performance of the dog during agility. If time is limited prior to an agility run, a low impact exercise is more important than stretching. After training or agility performance, cool down exercises are important followed by application of an ice pack to the groin for 5 minutes on, 5 minutes off, and then 5 minutes on.

Surgery is indicated for those dogs that fail to respond to medical treatment or have frequent recurrences. Surgical cutting of the tendon from the femur should not be performed unless the diagnosis has been confirmed with ultrasound imaging, CT scan, or MRI. Outcome with surgery is good to excellent; however, working dogs likely will only be able to work at a reduced level to prevent additional injury to other muscles around the hip.

References

1. Nielsen C, Pluhar E. Diagnosis and treatment of hind limb muscle strain injuries in 22 dogs. Vet Comp Orthopedics Traumatology 18:247-53, 2005
2. Breur GJ, Blevins WE. Traumatic injury of the iliopsoas muscle in three dogs. J Am Vet Med Assoc 210:163-164, 1997
3. Janssens LA. Trigger points in 48 dogs with myofascial pain syndromes. Vet Surg 20:274-8, 1991
4. Kirkendall DT, Garrett WE. Clinical perspectives regarding eccentric muscle injury. Clin Orthop S81-9, 2002



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Iliopsoas Muscle Tear Continued...

Assessment and recommendations

Patient: _____ Date: _____

- Your companion has an iliopsoas muscle strain
- Rehabilitation therapy by a professional is recommended
- Surgery is recommended by a surgeon at Michigan Veterinary Specialists

The following has been prescribed

- No medications or diet are necessary at this time
- Gentle range of motion of the hip – 20 reps 3 times daily for 2 weeks
- Ice pack the affected groin muscle three times daily for 7 days
- Nonsteroidal anti-inflammatory medication: _____
- Muscle relaxant: _____

Exercise

- Unlimited
- Low impact exercise (leash walks on grass) 10 minutes three times daily, followed by gradual increase in activity
- No exercise is recommended for 2 weeks, low impact exercise is recommended for 6 weeks

Recheck evaluation

- In 2 weeks with your dog's surgeon
- In 4 weeks with your dog's surgeon

Preparation for surgery

- Start fasting your companion at midnight before the surgery; water should not be withheld
- Pepcid AC 10 mg tablets: give _____ tablets with water (if needed use a syringe) at 6 AM on the day of surgery

*Composed by Daniel A. Degner, DVM, DACVS
Edited by Ned F. Kuehn, DVM, MS, DACVIM*